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Recognition of Proprietary Interests in Software in Korea: Programming for Comprehensive Reform

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I. INTRODUCTION

The Republic of Korea is engaged in a determined drive to attain material and technological parity with the industrially developed nations. Judging from basic economic indicators, definite progress has been made, although a relatively high level of external debt and recent political uncertainties have caused concern and the extension of prosperity to a broader segment of society remains an unmet priority.[1]

The issue of intellectual property rights has assumed intensified importance in Korean development in recent years. The least tangible of all economic assets—knowledge, process, and technique—now figure among the most important elements in economic advancement.[2] As the Korean economy progressed from postwar subsistence to the present level of industrialization, the legal system gradually extended protection to foreign-held intellectual property rights, initially in the area of trademarks and more recently through patent law reforms. The most serious lacuna remained, however, in the Korean law of copyright, which provided no protection for software or works published in other nations.

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1. The Korean economy is centrally directed with policies implemented according to broad guidelines established by five-year plans. For a statistical outline of the current plan and the performance of previous plans, see ECONOMIC PLANNING BOARD, MAJOR STATISTICS OF KOREAN ECONOMY 8–13 (1985).

2. For studies of the methods of technology acquisition and assimilation, see Kim, *The Role of Technology in Economic Development*, in BUSINESS LAWS IN KOREA 693 (C. Kim ed. 1982) [hereinafter KIM]; Westphal, Rhee & Pursell, *Foreign Factors in Korea's Industrialization*, in MODERNIZATION OF KOREA AND THE IMPACT OF THE WEST 190 (C. Lee ed. 1981). *See generally* M. FLORY, DROIT INTERNATIONAL DU DEVELOPPEMENT 233–45 (1977).

The United States, prompted in part by deepening international trade deficits,[3] has begun to reexamine its trade relationship with Korea. With respect to intellectual property issues, the U.S. brought direct pressure to bear through a formal action in October 1985 under § 301 of the United States Trade Act of 1974.[4] The complaint alleged inadequate protection of American intellectual property rights, particularly in the areas of product patents, literary copyrights, and computer programs.[5]

In July 1986, Korea and the United States, as part of a comprehensive trade accord, settled their intellectual property disputes.[6] Under the accord, Korea undertook to enact new legislation protecting product patents, foreign copyrights, and computer programs, and to accede to the Universal Copyright Convention.[7] In the legal and commercial context, the implications of the accord are profound for Korea and its trading partners. On a conceptual level, Korea's decision to enact separate legislation for computer programs, rather than expanding the scope of the copyright statute, is worthy of note in the debate among international

3. *See The Links Between Investment, Intellectual Property and Trade* (interview with Assistant U.S. Trade Representative Harvey Bale), 3 Econ. Impact 30 (1986).

4. 19 U.S.C. § 2411. Section 301 was amended by the Trade and Tariff Act of 1984, which gave the President the authority to initiate actions, under the Act. Section 301(a) provides as follows:

> (a) DETERMINATIONS REQUIRING ACTION.
>
> (1) IN GENERAL—If the President determines that action by the United States is appropriate—
>
> (A) to enforce the rights of the United States under any trade agreement; or
>
> (B) to respond to any act, policy, or practice of a foreign country or instrumentality that
>
> (i) is inconsistent with the provision of, or otherwise denies benefits to the United States under, any trade agreement, or
>
> (ii) is unjustifiable, unreasonable, or discriminatory and burdens or restricts United States commerce;
>
> the President shall take all appropriate and feasible action within his power to enforce such rights or to obtain the elimination of such act, policy, or practice.
>
> (2) SCOPE OF ACTION—The President may exercise his authority under this section with respect to any goods or sector
>
> (A) on a nondiscriminatory basis or solely against the foreign country or instrumentality involved, and
>
> (B) without regard to whether or not such goods or sector were involved in the act, policy, or practice indentified under paragraph (1).

5. The intellectual property complaint was the second § 301 action the United States brought. The first, in September, 1985, concerned market access in the insurance industry.

6. The Accord, announced simultaneously in Washington and Seoul on July 21, 1986, also provided limited American commercial access to the Korean cigarette market and insurance industry. The text of the Accord itself is not publicly available in Korea. *See* MINISTRY OF FINANCE BULLETIN No. 36, at 4–5 (1986) (Korea); Bello & Homer, *Current Developments*, 21 Int'l Law. 211, 220–23 (1987). A copy of the Accord is on file in the offices of the MICH. Y.B. INT'L LEG. STUDIES.

7. Universal Copyright Convention, *done* September 6, 1952 (Geneva), *revised* at Paris, July 24, 1971, 25 U.S.T. 1341, T.I.A.S. No. 7868, 943 U.N.T.S. 178. Korea will also accede in 1987 to the Geneva Phonograms Convention, Oct. 29, 1970, 25 U.S.T. 309, T.I.A.S. No. 7808.

legal scholars over the optimal form of protection for this relatively new technology.

This article will review the legal environment and major issues concerning software protection in the Republic of Korea, and will describe the existing applicable laws and regulations and the trend towards software protection in the region. In addition, the implications of Korea's pending accession to the Universal Copyright Convention will be analyzed. Finally, this article will conclude with a discussion of the current reforms and their implications for Korean international trade law.

II. Legal Framework for Intellectual Property

The creation of a workable form of legal protection for computer programs in Korea was not simply a matter of amending a statute to incorporate a definition of software. For example, Korea was not a party to either of the major international copyright conventions;[8] thus, the comparative merits of accession to either the Berne Convention[9] or the Universal Copyright Convention became the subject of intense debate with respect to the effect of extending the protection of copyright to works published beyond the peninsula.

Similarly, the choice of the form of protection for computer programs was controversial in Korea as it has been elsewhere. Ultimately, a specific computer program law based generally upon copyright principles was adopted.[10] Before analyzing the pending reforms in detail, the overall context of Korean intellectual property law will be briefly discussed in order to place the software reform proposal within a meaningful analytical framework.[11]

A. Trademark Law and Reform

Recognition of the foreign investor's property interest in intangible economic assets in post-war Korea first developed in the realm of trademarks, trademark

8. Korea was subject to the Copyright Convention with Japan for Reciprocal Protection in Korea of Inventions, Designs, Trademarks, and Copyrights, May 19, 1908, T.S. No. 506. This Convention is no longer in effect.

9. Berne Convention for the Protection of Literary and Artistic Works, *done* May 4, 1896, *revised at* Paris, July 24, 1971 (amended Oct. 2, 1979) [hereinafter Berne Convention]. For the pre-revision text of the Convention, see 827 U.N.T. 53, 331 U.N.T.S. 217.

10. *See infra* notes 95–110 and accompanying text.

11. For an overview of Korean industrial property law, see World Intellectual Property Organization, The Situation of Industrial Property in the Countries of Asia and the Pacific 295–326 (1984). *See also* Chang, *A Memorandum on the Korean Industrial Property Rights,* in Kim, *supra* note 2, at 635; Ko, *Korean Laws and Policies on International Technology Licensing,* 11 Korean J. Comp. L. 51 (1983); Min & West, *The Korean Regime for Licensing and Protection of Intellectual Property,* 19 Int'l Law. 545 (1985); Park, *The Industrial Property Laws in Korea,* 13 Korean J. Comp. L. 83 (1985); West, *Evolving Industrial Property Law and Transfer of Technology in the Republic of Korea,* 18 Tex. Int'l L.J. 127 (1983).

licensing, and patents.[12] While acknowledging the owner's economic interest in trademarks, Korean law delimits the permissible scope of licensing obligations in order to protect domestic interests in various ways.[13] In a step indicative of the general trend toward increased recognition of intellectual property rights, in 1986 the government eliminated a longstanding requirement that all trademark licenses be linked to inducement of technology from the licensor, although "bare licenses" are not eligible for tax inducement agreements.[14] Although enforcement of foreign trademark rights cannot yet be predicted with unqualified assurance, the situation in this regard is generally considered to be greatly improved.[15]

B. Patent Law and Reform

Considerable progress has been made in the area of patent protection in Korea. Notable developments in recent years include accession to the Paris Convention[16] in 1980 and the Patent Cooperation Treaty[17] in 1984. Under the Patent Act[18] these treaty obligations prevail over conflicting provisions of domestic patent law.

In Korea, patents are granted on a first-to-file basis, as opposed to first use.[19]

12. Trademark Act, Law No. 2506 of February 8, 1973, *as last amended by* Law No. 3326 of December 31, 1980) (Korea). Additional licensing requirements are contained in the Foreign Capital Inducement Act Law No. 1802 of Aug. 3, 1966 (as amended) (Korea) [hereinafter FCIA] and the Enforcement Decree of the FCIA (Korea) [hereinafter FCIA Enforcement Decree]. Two unofficial English translations of the major Korean laws are available: CURRENT LAWS OF THE REPUBLIC OF KOREA (Government Legislative Administration Agency ed.) and LAWS OF THE REPUBLIC OF KOREA (Korean Legal Center ed.). All cites in this article are to official Korean laws as translationed by the authors.

13. For example, licensors cannot require the return of unpatented trade secrets on termination of the license. Economic Planning Board Public Notice No. 50, Scope and Standard of Undue Collaborative Activities and Unfair Trade Practices in International Agreement, promulgated July 18, 1981 (Korea).

14. FCIA Enforcement Decree, *supra* note 12, art. 24(1) (revised July 1, 1985).

15. *See* Baskerville, *Trademark Litigation Involving Foreign Business in the Republic of Korea,* 16 INT'L LAW. 521 (1982). Article 29 of the Trademark Act was amended by Law No. 3892 of December 31, 1986, to eliminate certain prerequisities to registration of license agreements regarding product quality; at the same time a new Article 45-2 was added to provide for cancellation of licenses on grounds of failure to maintain consistent quality.

16. Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 21 U.S.T. 1583, T.I.A.S. No. 6923, *last revised at* Stockholm, July 14, 1967, 24 U.S.T. 2140, T.I.A.S. No. 7727. *See* West, *supra* note 11, at 129–36.

17. Patent Cooperation Treaty, *opened for signature,* June 19, 1970, 28 U.S.T. 7645, T.A.S. No. 8733. Provisions for international applications pursuant to the Patent Cooperation Treaty have been incorporated into the Patent Act, *infra* note 18, arts. 157-2 through 157-21.

18. Patent Act, Law No. 2505 of February 8, 1973, *as last amended by* Law No. 3892 of December 31, 1986, art. 41 (Korea). A patent granted in violation of a treaty may be invalidated by trial. *Id.* art. 69. Procedural requirements are set forth in the Enforcement Decree of the Patent Act, Pres. Decree No. 6978 of December 31, 1973, *as last amended by* Pres. Decree No. 11254 of November 5, 1983 (Korea). Further amendment of the Enforcement Decree is under consideration as of this writing.

19. Patent Act, *supra* note 18, art. 11 (prior to 1986 amendment).

Until the reforms effective July 1, 1987, the term was twelve years from the date of publication, or the date of registration if not published.[20] The patent right does not extend to use for research or experimentation, items merely in transit through the country or identical products existing in Korea at the time of filing.[21] In addition, an order for injunctive relief or attachment cannot be obtained on grounds of infringement if an export license has already been granted for the allegedly infringing goods.[22] After the first four years from the date of filing, the Director of the Office of Patents Administration may grant a nonexclusive license to other interested parties if the patentee fails, without cause, to work the invention in Korea for a continuous period of three years.[23] Patents are subject to expropriation by the state if the invention is required for national defense or the public interest.[24]

A patentee or the exclusive licensee thereof may recover damages if the infringement was either intentional or negligent.[25] If, however, the infringer acted in good faith and without negligence, relief is limited to a cease and desist order, and the infringer is entitled to keep profits previously earned on the invention.[26] As it may be difficult to controvert, this good faith exception is an important defense, particularly since the discovery powers of a Korean court are far less extensive than those common in the United States.

1. Employee inventions

An employer is entitled to a nonexclusive license to use an employee's patent if the invention is within the scope of the employer's business and the invention was created in the course of employment ("invention in service").[27] Any contractual provision or other condition of employment providing that employees shall assign

20. *Id.* art. 53 (prior to 1986 amendment).

21. *Id.* art. 46(1). Article 47 (Nonexclusive License for Prior User) provides:

> Where, at the time of filing of a patent application for an invention, a person has, in good faith, been commercially working the invention in Korea or is, in good faith, in the process of installing or establishing industrial plant or equipment therefor in Korea, such person shall have an nonexclusive license on the patent right, the said license being limited to the purpose of his business.

Patent Act, *supra* note 18, art. 47.

22. Patent Act, *supra* note 18, art. 46(2).

23. *Id.* art. 51(2) (prior to 1986 Amendment). The Patent Administration may request a patent working report. *Id.* art. 79. Failure to work a patent commercially on a substantial scale for a three-year period was defined as an "abuse of patent right." *Id.* art. 52(1). (prior to revision). Article 51 was revised in December 1986, effective July 1, 1987. *See infra* note 36.

24. Patent Act, *supra* note 18, art. 50. Reasonable compensation must be paid for an expropriated right. *Id.* art. 50(3).

25. Patent Act, *supra* note 18, art. 156(1).

26. *Id.* art. 156(2).

27. *Id.* art. 17(1). *See generally* Godenhielm, *Employee Inventions*, 14 INT'L ENCYCLOPEDIA COMP. L., Ch. 7 (E. Ulmer ed. 1973).

patent rights (other than invention in service) or shall grant an exclusive right to the employer is void.[28] Employees are entitled to reasonable compensation, taking into account the benefit and contribution of the employer, for the assignment of patent rights or the granting of an exclusive license to the employer.[29]

2. Patent protection for computer-related inventions

In an early attempt to address concerns that programs were unprotected in Korea, the Office of Patents Administration promulgated guidelines in 1984 for computer-related inventions including software, computers, and components.[30] Judgment of eligibility for protection was to be based on the standard requirements for a patent and was made on a vaguely worded "overall" basis[31]—an exercise of administrative discretion that was difficult to challenge. The standards required that the function of the program be described in detail through flowcharts and explanation in the claim for protection.[32]

The prospect of delay and uncertainty inherent in the patent application process, however, rendered patent law unsuitable as the primary means of legal protection of software. Moreover, most software did not meet the standard of inventiveness for patentability.[33] The most serious flaw in the computer-related invention examination system, however, was requiring the software writer to expose the key elements of the program before protection was assured. As a result, the examination standards fell far short of answering the need of program developers. The Examination standards remain in effect, however, for computer "firmware."

As part of the trade Accord with the United States, Korea undertook to revise its patent system in several important respects. The Patent Act was revised to permit registration of product, as opposed to process, patents, which were previously excluded from patentability.[34] The patent term was increased from twelve to fifteen years.[35] The Office of Patents Administration continues to have the authority to grant compulsory licenses if the patent owner fails to work the patent, but the scope of administrative discretion has been clarified in this regard.[36] Korea is also scheduled to accede in late 1987 to the Budapest Treaty on

28. Patent Act, *supra* note 18, art. 17(3).

29. *Id.* art. 18.

30. OFFICE OF PATENTS ADMIN., EXAMINATION STANDARDS FOR COMPUTER-RELATED INVENTIONS (November 1984) (Korea).

31. *Id.* § 6(a). The phrase "overall basis" presumably would give the examiners the right to consider whatever factors were deemed appropriate.

32. *Id.* §§ 7, 8(b)(2).

33. WORLD INTELLECTUAL PROPERTY ORGANIZATION, MODEL PROVISIONS ON THE PROTECTION OF COMPUTER SOFTWARE 4–5 (WIPO Pub. No. 814(E), 1978) (estimates that perhaps one percent of programs would meet inventiveness standard) [hereinafter MODEL PROVISION].

34. Patent Act, *supra* note 18, art. 4. The implementing legislation was enacted in the Fall, 1986, session of the National Assembly and became effective July, 1987.

35. *Id.* art. 53.

36. *Id.* arts. 51 through 51-9.

Microorganisms.[37] The Korean Government has not yet determined whether to enact specific legislation to protect semiconductor chips. Nevertheless, the proposed amendments to the Patent Act will represent significantly enhanced patent protection, reflecting a growing, albeit reluctant, acceptance of the concerns of foreign technology licensors.

The present patent law provides a useful guide to the Korean concepts of the proper allocation of property interests both in terms of economic incentive and equity. Administrative government as implemented through the examination system is a case study of the Korean government's customary role as final arbiter in the economic process. These features of patent law, along with such elements as the course of employment doctrine and measure of damages, are indicative of the basic Korean legal theory that will influence the final realization and actual degree of enforcement of computer software protection.

C. Copyrights

1. Original publication

Until the recent revision, Article 46 of the Korean Copyright Act provided: "This Act shall apply to foreigners' copyrights unless otherwise specified in treaties, however, this Act shall protect only those who originally publish their works in Korea if there is no provision of protection of a copyright in the treaties." This provision was understandably the primary source of concern for foreign copyright holders, whether for software, literature, or other works.

One theoretical question which arose from this provision was whether "original" publication must be a unique publication. In countries that are not members of both international copyright conventions, publishers employ the technique of simultaneous publication. For example, although the United States is not a party to the Berne Convention, international publishers often simultaneously publish in the United States and in a country which is a party to Berne, thus founding copyright protection under both conventions.[38] The Berne Convention provides specifically for such simultaneous publication,[39] so if a work is published simultaneously in Korea and in a country party to Berne, then the work should be protected by Berne. Whether such publication would also have been deemed an "original" publication in Korea for the purposes of Article 46 of the 1957 Korean Copyright Act was never settled until the Copyright Act was completely revised.[40]

37. Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure, April 28, 1977.

38. *See* D. JOHNSON, COPYRIGHT HANDBOOK 123 (1982); S. STEWART, INTERNATIONAL COPYRIGHT AND NEIGHBOURING RIGHTS 46–47 (1983).

39. Patent Act, *supra* note 18, art. 5(4) provides: "The country of origin shall be considered to be: . . . (b) in the case of works published simultaneously outside the Union and in a country of the Union, the latter country. . . ."

2. Scope of copyright

Before the recent reforms copyrights in Korea were valid for only thirty years after the death of the author.[41] The 1957 Copyright Act provided that if the "copyright holders fail[ed] to publish a translation of their works within five years from the date of publication of the original works, the translation right shall be extinguished."[42] The Act provided for relief in the form of temporary injunctions,[43] but damages were limited to the return of the "existing profits" if a copyright was infringed "in good faith and without negligence."[44]

The 1957 Copyright Act protected works of "academic or artistic scope."[45] By way of comparison, Article 2 of the Berne Convention adopts a broad interpretation of the scope of works included in its definition of "literary and artistic works."[46] Software was not categorically excluded from copyrightability;[47] however, the Ministry of Culture and Information refused to register computer software copyrights, although instruction manuals could be registered.[48]

III. Protection of Computer Software

A. Software Litigation in Korea

Prior to the effective date of the new computer software law, program developers were forced to seek legal redress through ill-fitting or anachronistic regimes. Two recent cases indicated the need for a clear and comprehensive

40. *See infra* note 79.
41. 1957 Copyright Act, art. 30 (Korea).
42. *Id.* art. 34.
43. *Id.* art. 68.
44. *Id.* art. 66. The term "existing profits" was unclear.
45. Article 2 of the 1957 Copyright Act provided:

> "Works" in this Act means documents, public presentation, paintings, sculptures, artistic handicrafts, architecture, maps, figures, models, photographs, musical scores, performances, songs, choreographical notes, drama, production records, tapes, motion pictures and all other items having academic or artistic scope."

Id. art. 2

46. Berne Convention, *supra* note 9, art. 2.
47. Article 3 of the 1957 Copyright Act provided as follows:

> The following shall not be regarded as works under this Act:
> 1. Principal texts of acts, orders and government and public agency's documents, however, exceptions shall be made for those kept in classified categories,
> 2. Current new,
> 3. Miscellaneous reports carried in newspapers or magazines, and
> 4. Public presentations at open court rooms, the National Assembly, and local assemblies.

1957 Copyright Act, *supra* note 41, art. 3.

48. Ko, *Legal Protection of Computer Software in Korea: Creative Tactics in Anticipation of Reform*, in 3 Working Papers for the Ninth Law Asia Conference 425, 435–36 (1985).

regime of legal protection for software in Korea. In the first case, suit was brought under the Copyright Act for infringement of rights in a computer program.[49] A computer hardware vendor contracted to provide fifteen programs to induce the sale of computer hardware. The vendor in turn subcontracted for supply of the programs. The subcontractor provided only twelve programs to the vendor, who then supplied the programs to the buyer. Subsequently, the buyer demanded the additional programs, which were supplied directly to the buyer by the subcontractor. One of these three programs was allegedly written by the plaintiff, who sued the vendor (not the subcontractor) for copyright infringement. The court ruled that the contractor was not liable for the subcontractor's alleged copyright infringement, basing its decision only on the question of the scope of contractor liability without considering whether any liability under copyright could have existed.

In the second case, plaintiffs sought to test the availability of legal protection under an alternative theory. On February 11, 1986, a Korean computer company filed a civil complaint against a major Korean corporation, seeking to enjoin the unauthorized use of plaintiffs' programs.[50] The legal basis for the injunction petition was not copyright, but the Unfair Competition Prevention Act,[51] which provides for injunctive relief and damages for acts such as infringement of unregistered but well known trademarks or trade dress, commercial disparagement, acts causing confusion of origin, or passing off one's goods as those of another.[52] The issues of intellectual property protection and the appropriateness of the use of unfair competition law in a software case evaded decision, as the litigants reportedly settled the case before the legal issues were determined by the court.

These cases demonstrated the need for clear protection of the interest of software producers, domestic as well as foreign. Only the unequivocal recognition of a legitimate property interest in software can fully protect the interests of those software writers as well as foster the economic growth and technological self-reliance sought by the Korean government.

B. Regional Trends

In analyzing Korea's legal response to the challenge of advanced technology, regional experience in computer software protection should be taken into ac-

49. Kim v. Lee, Decision of Mar. 6, 1985, Seoul Civ. Dist. Ct., 84-KA-HAP-4048, *reprinted in* COMPUTER JOURNAL 200, 206 (February 1986) (in Korean).

50. Sangyong Computer Co. v. Daewoo, *filed* February 11, 1986, Seoul Civil Dist. Ct., HANKOOK KYUNGJE SHINMUN, Feb. 13, 1986, at 8 col. 4.

51. UNFAIR COMPETITION PREVENTION ACT OF DECEMBER 30, 1961 (Korea).

52. Even the common-law courts in England were unwilling to widen the tort of unfair competition beyond "passing off." J. LAHORE, G. DWORKIN & Y. SMYTH, INFORMATION TECHNOLOGY: THE CHALLENGE TO COPYRIGHT 110 (1984).

count, not only in the interest of gaining legal insight from the experience of neighboring countries, but also because Korea is in direct commercial competition with other countries in the region, most particularly with Japan. Unlike the new Korean program law, the regional as well as worldwide approach to computer software protection generally tends to be in the direction of copyright.[53]

For example, the Australian Copyright Act was amended on June 7, 1984, to include programs in the definition of literary work.[54] Even before the law was amended, however, an intermediate appeals court held that the Copyright Act did in fact encompass programs.[55] Similarly, the Indian Copyright Act was amended in 1984 to include protection of computer programs.[56] In the Philippines, computer programs were specified copyrightable by presidential decree.[57] Computer programs have been ruled copyrightable in an interlocutory proceeding in Hong Kong.[58] The Republic of China has legislatively extended copyright protection to software.[59] The People's Republic of China, however, as yet has no specific legal protection of computer programs.[60]

An influential example of copyright reform is that of Japan. Japan has long been the predominant economic power in the region, and Korea's intense commercial competition with Japan is a force in Korea's economic policy decision-making. Japanese economic or technological dominance is unacceptable to

53. GROUP OF EXPERTS ON THE COPYRIGHT ASPECTS OF THE PROTECTION OF COMPUTER SOFTWARE 3, UNESCO/WIPO/GE/CCS/3, Mar. 8, 1985 [hereinafter UNESCO/WIPO REPORT].

54. AUSTRALIAN COPYRIGHT AMENDMENT ACT OF 1984. The amendment also protects programs in both source and object form regardless of medium, defines conversion from source to object code and from one high-level programming language to another as adaptation, permits back-up copies and strengthens sanctions. GROUP OF EXPERTS OF THE COPYRIGHT ASPECTS OF THE PROTECTION OF COMPUTER SOFTWARE, LEGAL PROTECTION FOR COMPUTER PROGRAMS: A SURVEY AND ANALYSIS OF NATIONAL LEGISLATION AND CASE LAW, UNESCO/WIPO/GE/CCS/2, December 17, 1984 [hereinafter UNESCO/WIPO STUDY]. *See also* Kerr, *Computers and Copyright—An Australian Perspective*, Paper presented to the Ninth Conference of the Law Association for Asia and the Pacific (Oct. 8, 1985). A copy of the paper is on file in the offices of the MICH. Y.B. INT'L LEG. STUDIES.

55. Apple Computer, Inc. v. Computer Edge Phy, Ltd., Decision of May 29, 1984, Case No. G405 of 1983, *rev'g* Decision of Dec. 7, 1983, Case No. G230 of 1983.

56. *See* A. PRATAP, TECHNOLOGY TRANSFER AGREEMENTS IN INDIA 6 (1985).

57. PRESIDENTIAL DECREE NO. 49, *effective* December 6, 1972, *cited in* UNESCO/WIPO STUDY, *supra* note 54, at 28.

58. Atari, Inc. & Others v. Video Technology, Ltd. & Soundic Electronics, Civ. App. Nos. 117 & 118 of 1982, Court of Appeals, October 6, 1982, *cited in* UNESCO/WIPO STUDY, *supra* note 54, at 32–33.

59. *See* Kim v. Lee, Decision of Mar. 6, 1985, Seoul Civ. Dist. Ct., 84-KA-HAP-4048, *reprinted in* COMPUTER JOURNAL 200, 204 (February 1986) (in Korean). Based on Taiwan's enactment, foreign investors argued that "the failure of Korea to have adequate software protection may well result in preferential investment by foreign companies in Taiwanese computer and software industries at the expense of Korea." AMERICAN CHAMBER OF COMMERCE IN KOREA, THE NEED FOR COMPUTER SOFTWARE PROTECTION IN KOREA 49 (1986).

60. UNESCO/WIPO REPORT, *supra* note 53, Annex B, at 2. For a general guide to legal protection of computer programs in China, see M. PENDLETON, INTELLECTUAL PROPERTY LAW IN THE PEOPLE'S REPUBLIC OF CHINA (1986).

Korea for historical reasons as well as present trade policy. Although internal structual factors play the major role in Korean policymaking, the detailed and extensive studies by the Japanese Government and the resultant legislation bear examination in this context.

A subcommittee of the Japanese Cultural Affairs Agency issued a report on June 1, 1973, that "recognized that computer programs were entitled to protection under the Copyright Law and examined the [uses of] programs that could be subject to copyright control."[61] A study proposing a *sui generis* registration system to govern software rights was published in May, 1972, by a special committee of the Ministry of International Trade and Industry (MITI).[62] On December 9, 1983, MITI published a draft Program Rights Law delineating a system of deposit and registration requiring a formal prior examination to establish rights in software and proposing a term of probation of fifteen years. The draft stipulated that computer programs could not be the subject of copyrights.[63] In January, 1984, the Ministry of Education published a competing report emphasizing the international trend towards copyright protection and calling for amendment of the Copyright Law.[64] Ultimately, MITI withdrew its draft in favor of the copyright approach.[65]

On January 7, 1985, the Japanese Diet approved final passage of the software related amendment to the Copyright Law. This amendment became effective in January, 1986.[66] The Law defines a computer program as "an expression of combined instructions given to a computer so as to make it function and obtain a certain result."[67] The Law permits modification of a program in derogation of the general right to integrity of copyrighted work ("moral rights").[68] The Law further provides that the use of infringing copies is also an act of infringement, provided

61. Doi, *Copyright Protection of ComputerProgram—A Review of Legislative and Judicial Developments in Japan*, Paper presented to the Ninth Conference of the LawAssociation for Asia and the Western Pacific 11 (October 8,1985). A copy of the paper is on file in the offices of the MICH. Y.B. INT'L LEG. STUDIES.

62. UNESCO/WIPO REPORT, *supra* note 53, Annex B, Appendix, at 4–7. *See* Doi, *supra* note 61, at 14, UNESCO/WIPO STUDY, *supra* note 54, at 23–25. *See also* Gresser, *A Lawyer for the Situation: The U.S.-Japan Software Wrange*, Paper presented to Stanford Law School Conference (July 12, 1984), UNESCO/WIPO STUDY, *supra* note 54, Annex B (summary of draft bill).

63. UNESCO/WIPO REPORT, *supra* note 53, Annex B, Appendix, at 1–4. *See* Doi, *supra* note 61, at 12–14, UNESCO/WIPO STUDY, *supra* note 54, at 23–25.

64. UNESCO/WIPO STUDY, *supra* note 54, at 25–27.

65. Doi, *supra* note 61, at 15.

66. Law No. 62 of 1985. For the history of Japanese copyright law prior to the amendments, see Nomura, *Japan*, in S. STEWART, *supra* note 38, Ch. 24. Even before passage of the law, civil and criminal enforcement of computer program rights had been extended by Japanese courts. *See* UNESCO/WIPO STUDY, *supra* note 54, at 19–20; UNESCO/WIPO REPORT, *supra* note 53, Annex B, at 4.

67. Copyright Law of Japan, art. 2(a)(X*bis*), *translated in* COPYRIGHT RESEARCH INSTITUTE, COPYRIGHT LAW OF JAPAN.

68. *Id.* art. 20(1).

that the user was aware of the initial infringement at the time he acquired the copies.[69]

The Japanese Law also provides for a system of registration of software rights, somewhat similar to a first-to-file trademark registration system.[70] Creations of employees are specifically presumed to be the property of the employer if the work was within the scope of employment at the employer's initiative, even if the work is published in the employee's name, unless contractually provided otherwise.[71]

The United States will undoubtedly continue to bring pressure for increased protection of intellectual property rights in this region. As the brief survey above indicates,[72] varying degrees of statutory or judicial protection have been developed. Comparative legal analysis as well as political and economic calculations figure prominently in the formation of the Korean legal response. Related legal amendments in the Republic of China, for example, were cited by foreign interests as a factor to be considered in Korea with respect to the possible loss of foreign investment if Korea accorded less protection.[73] To a foreign licensor, the actual degree of enforcement available in a given jurisdiction—particularly the willingness of the courts to grant injunctive relief and the adequacy of damages recoverable—will be more important than the *de jure* protection available.[74]

IV. The Program for Reform

In the first five months of 1986, Korean exports of computer products, including software, totaled US $ 840.9 million.[75] Although imports far exceed exports, indications are that the domestic software industry may follow the rapid growth

69. *Id.* art. 113(2). *See also* Doi, *supra* note 61, at 4.

70. Copyright Law of Japan, art. 76*bis*, *translated in* Copyright Research Institute, Copyright Law of Japan.

71. *Id.* art. 15(2). *See also* Doi, *supra* note 61, at 16. *See generally* Kamakura, *The Employee Inventor in Japan*, Intellectual Property Law in Asia and the Pacific 22 (WIPO Pub. No. 435 E, June 1985).

72. *See* article by T. Doi in this Volume.

73. *See supra* note 58.

74. For a discussion of the problems encountered in international software licensing, see Kohlmann, *Problems of Protecting and Enforcing Intellectual Property Rights*, A.B.A. Sec. Int'l L. & Prac., Licensing & Distribution of High Tech Products 17–40 (Spring Meeting 1986).

75. Journal of the American Chamber of Commerce in Korea, Sept. 1986, at 60. Recent statistics were cited as follows:

Hardware (UNIT: U.S. $1 million)

Year	Total	Computer/peripheral equip.	Semiconductors/elements	Software
1981				
Export	554.3	66	485	3.3
Import	686.0	152	534	–

pattern of related industries.[76] Domestic software producers have an interest in protecting their investments in software development. Similarly, foreign licensors may be unwilling to introduce highly sophisticated programs and related technology without assurance that their rights will be protected by law. The entire issue of intellectual property has become a major source of friction in Korea's international trade relations. For historical and political reasons, however, any revision that would seem to cede foreign technological dominance is unacceptable in Korea.

Against this background, the complexity of the issues that faced Korean lawmakers is clear. In the United States, amendment of the Copyright Act to incorporate a definition of software was primarily a matter of clarifying and augmenting the scope of an existing, well developed body of law.[77] The law dealing with this new technology rested on a bedrock of well-settled notions of rights in intangible property. In Korea, however, the protection of computer programs according to copyright principles was enacted simultaneously with a complete revision of the copyright regime.

A. Copyright Reform

The most significant aspects of the copyright law revisions are the extension of the period of protection to fifty years after the author's death[78] and the allowance

	Hardware (UNIT: U.S. $1 million)			
Year	Total	Computer/peripheral equip.	Semiconductors/elements	Software
1982				
Export	690.0	96	591	4.0
Import	815.0	209	605	–
1983				
Export	1,056.9	204	845	3.9
Import	1,150.0	287	862	–
1984				
Export	1,645.9	400	1,243	3.9
Import	1,536.9	325	1,199	11.9
1985				
Export	1,518.1	550	964	5.1
Import	1,472.8	399	1,050	23.8
1986				
Export	840.9	333	505	2.9
Import	778.0	253	525	–

76. Part of the increased demand will stem from large-scale computerization of government offices. *See Korea's Software Industry Awaits New Copyright Law,* KOREA BUS. WORLD, April 1987, at 62.

77. The U.S. Copyright Act was amended in 1980 to include the definition of a "computer program" at 17 U.S.C. § 101.

78. Copyright Act, *as revised by* Law No. 3916 of December 31, 1986, art. 36 (Korea) [hereinafter Revised Copyright Act].

of copyrights for foreign works covered by treaty or simultaneous publication.[79] Translation rights will lapse if not exercised seven years after release of the original work.[80] A Copyright Deliberation and Mediation Committee will set compensation for certain statutorily permitted uses of copyrighted works (such as use in educational programs) and to rule upon matters referred by the Ministry of Culture and Information or three or more members of the Committee.[81] Damages in infringement cases, presumed to be "the amount of profit made by the infringer," in addition to lost royalties, are available only in cases of intentional or negligent infringement.[82] Relief may include injunctions and seizure of infringing material.[83] Such relief may be applied prospectively.

1. Initial proposals for software

Two competing versions of reform were originally debated for the specific protection of computer programs. The Ministry of Science and Technology proposed a *sui generis* form of protection separate from the Copyright Act, entailing a system of registration and deposit.[84] The Ministry of Culture and Information favored revision of the Copyright Act to include computer programs explicitly, coupled with accession to one of the major international copyright conventions.[85]

The domestic publishing industry reacted strongly against the copyright reform initiatives. The Korean Publishers Association stated that accession to the Berne Convention in particular would harm domestic interests, and that

79. Article 3 of the Revised Copyright Act reads as follows:

> 1. Foreigners' works shall be entitled to protection under any treaties entered into or signed by the Republic of Korea, provided, however, that foreigners' works published before the effectiveness in Korea of such treaties shall not be protected.
>
> 2. Works of a foreigner who resides at all times in the Republic of Korea (including foreign jurisdical persons having a principal office in Korea) and foreigners' works which are first published in the Republic of Korea (including works published in the Republic of Korea within thirty days after publication in a foreign country), shall be entitled to protection under this Act.
>
> 3. If any country fails to fully protect Korean works, protection for works of a citizen of that country may equivalently be restricted under the related treaty and under this Law even if the foreigners' works fall within the category of Paragraph 1 or Paragraph 2 above.

Id. art. 3.

80. Article 49 of the Revised Act provides that upon approval by the Minister of Culture and Information and deposit or payment of the royalty set by the Minister, a translation may be published if either (a) seven years have passed since first publication and the translation has not been published or is out of print or (b) the author cannot be found after good faith efforts to do so.

81. Revised Copyright Act, *supra* note 78, arts. 81–90.

82. *Id.* art. 89.

83. *Id.* art. 91.

84. Maeil Kyungje Shinmun (Economic Daily), Feb. 15, 1986, at 1, col. 2. *See also* Ko, *supra* note 47, at 495.

85. Ko, *supra* note 47, at 444–46.

copyright reform in general would lead to social stagnation.[86] A basic premise of the argument against reform was the vital necessity in a developing country for easily accessible and inexpensive literature, especially educational materials. Developing countries such as Korea are legitimately concerned by the prospect that cultural and scientific progress could be impeded if publication is controlled by the interests of developed countries.

2. International dimension

Effective protection of foreign copyrights and program rights may ultimately depend upon interpretation of treaty obligations. Korea's resistance to joining a copyright convention is doubtless based upon the perception that accession would retard development and would primarily benefit only the industrially developed countries. Both major copyright conventions contain special provisions regarding developing countries. Article V*bis* of the Universal Copyright Convention provides that developing countries may avail themselves of special exceptions by notifying the Director-General of UNESCO.[87] The notification is valid for a ten-year term, renewable unless the country "has ceased to be regarded as a developing country." If the copyright holder refuses to grant the right of translation into the language of a developing country within three years, or within one year for a language not in general use in one or more of the developed contracting States, a nonexclusive license may be granted to translate the work for teaching, scholarship or research purposes, provided that reasonable royalties are paid.[88] In addition, for scientific and technological works which are not distributed in the developing country for three years from the date of first publication, a nonexclusive license may be granted to publish the work for use in "systematic educational activities."[89] The Berne Convention provides basically similar exceptions effective upon notification of the Director General of the World Intellectual Property Organization.[90]

Under the Universal Copyright Convention, no rights are acquired *jure conventionis*, but the signatories are under a contractual obligation of enforcement by means of domestic legislation.[91] In contrast, Berne Convention rights are to be

86. Resolution of the Korean Publishers Association, Jan. 9, 1986.

87. Universal Copyright Convention, art. V*bis* (3). *See also* S. Stewart, *supra* note 38, at 160–72.

88. Universal Copyright Convention, art. V*ter*. The revised Copyright Act translation right provisions, *supra* note 79, would seem to extinguish the rights for any specific language into which the work is not translated, but the Convention limits the translation exception to the languages in general use in the country.

89. Universal Copyright Convention, art. V*quater*.

90. Berne Convention, *supra* note 9, Appendix, art. I.

91. Universal Copyright Convention, art. IV*bis* (state may "make exceptions that do not conflict with the spirit and provisions of the Convention"). Upon accession, the "State must be in a position under its domestic law to give effect to the terms of this Convention." art. X(2). *See* S. Stewart, *supra* note 38, at 148.

enforced *jure conventionis*.[92] The Berne Convention's broader scope of "retroactive" copyright protection was a major concern to the Korean publishing industry.[93] Ultimately the Korean Government decided to accede only to the Universal Copyright Convention (with respect to the Copyright Act in the latter half of 1987 but possibly with a reservation as to program rights), apparently because of the lack of a requirement for retroactive effect[94] and in part because the United States, which exerted the most pressure on Korea in this respect, is not a member of the Berne Convention. Although the Universal Copyright Convention does not directly address computer programs,[95] Korea will provide protection under the new program rights law on a generally reciprocal basis;[96] it is not yet known, however, exactly when and how Korea will accede to the Convention with respect to program rights.

B. The Computer Program Protection Act

The Computer Program Protection Act became effective July 1, 1987.[97] The period of protection it provides is fifty years from the time the program was created.[98] The Act applies to programs created by foreign nationals if first published in Korea. A program will meet the "first published" requirement if published in Korea within thirty days of its first publication abroad. The Act also

92. S. Stewart, *supra* note 38, at 160.

93. Article 18 of the Berne Convention provides:

> (1) This Convention shall apply to all works which, at the moment of its coming into force, have not yet fallen into the public domain in the country of origin through the expiry of the term of protection.
>
> (2) If, however through the expiry of the term of protection, which was previously granted, a work has fallen into the public domain of the country whether protection is claimed, that work shall not be protected anew.
>
> (3) The application of this principle shall be subject to any provisions contained in special conventions to that effect existing or to be concluded between countries of the Union. In the absence of such provisions, the respective countries shall determine, each in so far as it is concerned, the conditions of application of this principle.
>
> (4) The preceding provisions shall also apply in the case of new accessions to the Union and to cases in which protection is extended by the application of Article 7 or by the abandonment of reservation.

Berne Convention, *supra* note 9, art. 18.

94. Revised Copyright Act, *supra* note 78, Addenda, art. 2 (1) contains an interim measure specifying that the Act will not be applicable to "works in whole or in part whose copyrights have lapsed completely or which were not protected under the previous Copyright Act prior to the enforcement of this Act."

95. Bell, *The Conventions in Multinational Protection of Copyright*, INTELLECTUAL PROPERTY IN ASIA AND THE PACIFIC 7, 29–30 (WIPO Pub. No. 435 E, Sept. 1985).

96. *See infra* note 96.

97. Computer Program Protection Act (Bill), Addenda, art. 1 (Korea) [hereinafter Program Act].

98. *Id.* art. 8(3).

applies to a reciprocal degree to programs the Republic of Korea is obligated to protect "in accordance with an international treaty".[99] Presumably the international treaties referred to are the Universal Copyright Convention or any subsequent bilateral treaties.

In many respects, the Act is deceptively simple. Publication is defined as "reproduction of a program in a quanity sufficient to meet public demand, and distribution thereof to the public."[100] Since specialized programs are often provided on a selective basis — not in a quantity to meet public demand — a literal interpretation of the Act would exclude coverage of some of the most valuable software products. The Act provides for use by administrative adjudication, in effect a mandatory license.[101] The Act does not contain provisions for appeal of a grant of mandatory license or royalties though such matters may be set forth in the Enforcement Decree.[102]

Under the Program Act a "derivative program" is defined as "a program adopted from the original program."[103] Derivative programs are protected as independent programs.[104] The Act provides that the programs may be modified in certain cases.[105] The Act also provides that ownership of programs created in the course of employment will be attributed to the employer unless otherwise specified by contract or employment regulations.[106]

The program may be registered with the Ministry of Science and Technology

99. *Id.* art. 3.

100. *Id.* art. 2 (7).

101. Article 19(1) (Use by Means of Administrative Adjudication) of the Program Act reads:

> If a license to use a program is unobtainable because the program right holder is unknown, or cannot be communicated with, *or a mutual agreement cannot be reached,* despite substantial efforts, anyone who intends to use the program may do so upon obtaining approval from the Minister of Science and Technology in accordance with the provisions of Presidential Decree and deposited compensation set by the Minister of Science and Technology for the program right holder.

Id. art. 19(1) (emphasis added).

102. The Enforcement Decree of the Act has not been promulgated as of this writing.

103. Program Act, *supra* note 97, art. 2(5).

104. *Id.* art. 5. The original author may use and reproduce the derivative program. *Id.* art. 13(2). If a derivative program is released, the original program will be deemed released. *Id.* art. 9(3).

105. Article 11 provides in pertinent part the following permitted exceptions to the author's right to preserve the integrity of the programs:

> 1. Modifications to a program which cannot be used other than in a specific computer within the scope necessary for use in another computer.
>
> 2. Limited modifications of a program within the scope necessary for more efficient use in a specific computer.
>
> 3. Modifications deemed unavoidable in the light of the nature of a program or the purpose of its use.

Id. art. 11.

106. *Id.* art. 7.

within six months of its creation.[107] Although registration is ostensibly optional, the transfer, pledge, or limitations on a program copyright cannot be asserted against a third party unless the program is registered.[108] Program rights will be enforceable by means of injunctive relief, including prospective relief to prevent future infringement.[109] Damages, including wrongful profits and lost royalties, may be claimed in cases of intentional or negligent infringement.[110] Injunctions and damages will be available only if the program has been both registered and deposited with the Ministry of Science and Technology. The Act calls for the establishment of a "Deliberation and Mediation Committee" to arbitrate disputes and advise the Minister of Science and Technology.[111] Enforcement of the act will be prospective only.[112]

The Program act seems to have been based in certain respects on the Model Provisions drafted by the International Bureau of the World Intellectual Property Organization.[113] The Model Provisions, however, do not contain any reference to "derivative programs," nor are deposit and registration required. The derivative program provisions are likely to cause concern—and litigation—particularly with regard to determining whether a program was used with effective consent. The Act does not stipulate express written consent; thus, a defense against infringement claims will be the assertion that the program was used for the

107. The following matters must be registered:
(1) The name or title of the program;
(2) Nationality real name and location of the program author;
(3) Date of creation of the program; and
(4) A summary of the program.

Id. art. 21. The registration procedure will be prescribed in detail by a Presidential Decree.

108. *Id.* art. 24.

109. *Id.* art. 25(1). Concurrently, claim may be instituted demanding the destruction of the infringing items. *Id.* art. 25(2).

110. Negligence is presumed. Program Act, art. 29 (The Right to Claim Damages) reads in full as follows:

> (1) The program author or the program copyright holder may make a claim for damages against any person who has intentionally or negligently infringed its rights in the program.
> (2) Anyone who has infringed another person's registered program shall be presumed to have been negligent in the commission of the infringement act.
> (3) The amount of profits which the infringer has gained through his infringement act shall be presumed in the amount of damages sustained by the program copyright holder.
> (4) The program copyright holder may make a claim for the payment of an amount equivalent to the royalties for the program in addition to the amount of loss under Paragraph 3.

Id. art. 29.

The Program Act also contains criminal penalties (up to three years' imprisonment and 63,000,000 Won fine) in Articles 32 and 34.

111. Program Act, *supra* note 97, art. 29.

112. Provisional Measures, art. 2 (Korea).

113. *supra* note 35.

creation of a derivative work with the copyright holder's implied or oral consent. Another likely defense to infringement actions will be the assertion that the program was used in good faith. The Act thus provides defenses consistent with those of the Patent Act[114] and Copyright Act,[115] although negligence will at least be presumed for programs on deposit with the Ministry of Science and Technology. The course of employment provisions are basically favorable to employers.[116] Licensing agreements entailing the transfer or use of programs will require careful interpretation of the new law.

The deposit system is nominally optional but is in fact a prerequisite to enforcement.[117] The extent and form of disclosure required will be of concern to licensors, as will be discussed below in the context of treaty compliance. The Deliberation and Mediation Committee, analogous to the Copyright Deliberation and Mediation Committee,[118] will mediate disputes and advise the Minister of Science and Technology regarding copyrights. Ministerial interpretations are accorded considerable deference in Korean administrative legal practice.[119] The

114. *See supra* notes 25–26 and accompanying text.

115. *See supra* note 44 and accompanying text. *Cf.* Japanese good faith defense, *supra* text accompanying note 69.

116. *See supra* notes 27–29, 72 and 104 and accompanying text.

117. An optional deposit system of the kind referred to would have three main purposes:

(1) to enable the public to have direct access to non-secret computer software;
(2) to provide the depositor with evidence of the prior existence of this computer software;
(3) through publication of an abstract of the computer software, to enable the public to know the kind of software available.

Doubts have been expressed, however, as to whether the first-mentioned purpose could be achieved through a deposit system of the kind indicated. It might be impracticable to require the deposit of computer programs in machine-readable form, and would be impossible for a depositary authority to provide copies of such programs unless it had a wide range of machinery for doing so, and it might not, in any event, be desirable that the public should be given copies of programs in machine-readable form (even if they are not secret) owing to the danger of infringement of the rights in the program; the deposit would be of limited value if only hard copies of the program or its related software were available to the public. Moreover, the public could never be sure that a computer program had not been updated since its deposit; thus, potential users would in any event have an interest in directly establishing contact with the depositor. Doubts have also been expressed concerning the second purpose mentioned in the preceding paragraph; the same evidential advantages could perhaps be achieved through the deposit of the computer software elsewhere, with a notary public for instance. If all that remains is the third purpose mentioned, this could be achieved through the simpler registration system. *See* MODEL PROVISION, *supra* note 33, at 6–7; *see also supra* notes 105–08 and accompanying text.

118. *See supra* note 80.

119. Typically, the interpretation of a given area of law may require reference to the applicable legal code, an enforcement decree, regulations, published or internal guidelines and notices, ministerial interpretations, court decisions (though *stare decisis* theoretically does not apply), custom, the writings of scholars and analogous foreign law.

Program Act is silent on the degree to which other forms of protection (patents, trade secrecy, unfair trade) are supplanted or augmented by the Act.[120]

C. Treaty Protection

A number of interesting legal issues will arise when foreigners attempt to enforce copyright protection of computer programs under the Universal Copyright Convention. Article III of the Convention provides in part as follows:

> (1) Any Contracting State which, under its domestic law, requires as a condition of copyright, compliance with formalities such as deposit [or] registration . . . shall regard these requirements as satisfied with respect to all works protected in accordance with this Convention and first published outside its territory and the author of which is not one of its nationals, if from the time of the first publication all the copies of the work published with the authority of the author or other copyright proprietor bear the symbol (c) accompanied by the name of the copyright proprietor and the year of first publication placed in such manner and location as to give reasonable notice of claim of copyright.
>
> . . .
>
> (3) The provisions of paragraph 1 shall not preclude any Contracting State from providing that a person seeking judicial relief must, in bringing the action, comply with procedural requirements, such as that the complainant must . . . deposit with the court or an administrative office, or both, a copy of the work involved in the litigation; provided that failure to comply with such requirements shall not affect the validity of the copyright, nor shall any such requirement be imposed upon a national of another Contracting State if such requirement is not imposed on nationals of the State in which protection is claimed.

Article III(4) of the Convention requires that "in each Contracting State there shall be legal means of protecting without formalities the unpublished works of nationals of other Contracting States." This requirement is particularly important in the software field, because many programs are never made public. The Convention does not clearly specify the required type or degree of legal means of protecting unpublished works.

Article 21 of the Program Act permits registration of programs within one year of the date created. Article 22 requires, for registration, submission of a copy of the program to the Ministry of Science and Technology. Potential registrants will weigh the disadvantage of submitting a program copy against the advantages of registration. Article 24 of the Act stipulates that without registration the program author cannot make claims against third parties arising from restrictions on the disposition or transfer of program rights or pledges thereon. Unless the registration system is established and administered so as to minimize the risk of exposing

120. Section 9 of the Model Provisions provides as follows:

> This Law shall not preclude, in respect of the protection of computer software, the application of the general principles of law or the application of any other law, such as the Patent Law, the Copyright Law or the Law on Unfair Competition.

MODEL PROVISION, *supra* note 33, § 9. *Cf.* note 63.

a copy of the program, program writers will be faced with a dilemma in deciding whether to register their works. Indeed, the registration system resurrects some of the defects of the patent approach to software protection—the necessity to expose the conceptual secret that makes the program function effectively.

If this requirement ends up in practice sufficiently onerous to eviscerate the enforcement of program rights—since the right holders will be unable to pursue third parties who violate transfer restrictions, but the same right holders may be justifiably unwilling to submit a copy of the program—then the question will arise of whether the new law satisfies the Convention's requirement of effective protection without formalities. Those favoring the registration system will rely on the litigation deposit exception of Convention Article III(3). At this time, it is still unclear exactly when Korea will accede to the Convention in respect of software. Thus, it may take several years to fully resolve some of the issues raised by the new Act.

V. Conclusion

The present and prospective Korean legal regime for the inducement of technology and the subsequent definition and governance of attendant rights must be considered in the context of the Korean goal of economic development. Whether Korea will in the long run succeed in establishing the long sought parity and economic independence is still not certain. Investing and licensing in Korea during this crucial phase of development will require a thorough understanding not merely of the letter of the law, but also of the legislative and social intent which will influence the interpretation, enforcement and modification of laws affecting foreign investment. In no other field is this analysis more critical than in the area of protection of intellectual property rights.

This article has traced the background and development of the Computer Program Protection act within the overall context of intellectual property law in Korea. The development of an internationally competitive software industry is well within Korea's grasp, but would prove elusive without a clear recognition of proprietary interests in software. The Act interfaces the requirements of software developers with the legitimate needs of economic development. Notwithstanding the complex questions remaining with regard to the actual form and degree of enforcement, the Act is a significant achievement that will be of interest not only to other software producers but also to other developing countries seeking to foster development of this crucial technology.[121]

121. The obstacles to developing computer technology have probably been overestimated to some degree. *See Hearings Before the Subcomm. on Investigations and Oversight & Subcomm. on Science, Research and Technology, of the House Comm. on Science and Technology*, 97th Cong., 2d Sess., at 100 (1982) (statement of Dr. Alan Kay, Vice President/Chief Scientist, Atari, Inc., *Measures to Address the Impact of Computer Technology on Lesser Developed Countries*).